

Children's Social Competence, Peer Status, and the Quality of Mother-Child and Father-Child Relationships

A Multidimensional Scaling Approach

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Abstract. This study examined links between parents' and children's interactive style at home and children's social competence among peers defined in terms of both prosocial, aggressive, and isolate behavior and social success at school. Participants were 34 children (7–9 years of age) who were observed at home and videotaped twice during 10 min free-play dyadic interactions separately with their mother and father over a 2-week period. Interactions were coded on global measures of positive, negative, controlling, disconfirming, and correcting behaviors and neutral conversation. Sociometric techniques based on peer nominations were used to assess children's behavioral orientations and social success at school. The structural relationship of the parental behavior categories and the links among this structure and children's social competence among peers were analyzed both by traditional statistical methods and multidimensional scaling techniques. Mothers' negative interactions and disconfirming correlated negatively with prosociality and positively with aggression, which in turn associated negatively with mothers' involvement in neutral conversation. Popular children were situated in a relationship structure where mothers were less controlling, less negative, less correcting, and less disconfirming and displaying more positive behavior than was the case for rejected and average children. There were few associations among fathers' interactions and children's social competence. Nevertheless, when a multidimensional scaling approach was used rejection appeared to be located within a harsh relationship with both parents. Children who were negative, controlling, and disconfirming when interacting with their parents at home, and who were more aggressive to peers, were more rejected at school.

Keywords: children's social competence, peer acceptance, observed quality of parent-child relationships

Introduction

Parental influence on a child's social competence within peer groups has been investigated for a long time. However, little is known about the everyday-life relational modalities through which both parents may affect children's social behavior and peer acceptance.

Indeed, past research has focused mostly on the link between children's social competence and on only specific aspects of a parent-child relation. For example, these studies indicated that a style based on induction is associated with a child's self-control, positive social interactions, and prosocial behavior with peers (Hart, DeWolf, Wozniak, & Burts, 1992; Hoffman, 1975), and that maternal directiveness affects social competence (Rose-Krasnor, 1997). By contrast, coercive means of regulating behaviors are related to aggressive interactions in peer groups, and maladjust-

ment (Dishion, 1990; Hart et al., 1992; Portes, Dunham, & Williams, 2001).

Much of the above cited research actually focused on the influence of mothers only. Few studies also took fathers into consideration. When this was the case, they mainly investigated the effect of parental disciplinary styles (Dishion, 1990; Hart et al., 1992) with some exceptions that took into consideration the combined influence of warm and positive expressiveness by both parents (Dekovic & Janssens, 1992; Gerrits, Goudena, & van Aken, 2005; Isley, O'Neil, Clatfelter [in refs Catfelter?], & Parke, 1999; Janssens & Dekovic, 1997; Lindsey & Mize, 2001; McDonald & Parke 1984, McDowell & Parke, 2000; Pettit, Brown, Mize, & Lindsey, 1998; Zhou et al., 2002), of their reciprocity within interactions (Pettit & Lollis, 1997), and of some aspects of their play behavior (Lindsey & Mize, 2000).

From the above-cited studies it appears that even though mother-child and father-child interactions are different in their content, the two contexts have a similar impact on both children's social skills and their popularity within peer groups: This research points not only to links between rearing modalities and children's social orientations but also to direct associations between parental disciplinary styles and peer status, with more assertive and coercive parents having children that are more rejected and less accepted in the peer groups (Hart et al. 1990[not in refs]; Hart et al. 1992; McDonald & Parke, 1984), and with both mothers' and fathers' authoritarian/restrictive child-rearing styles being linked to rejection, while democratic/authoritative rearing styles are associated with popularity (Dekovic & Janssens, 1992; Janssens & Dekovic, 1997).

In the majority of the above studies the influence of parenting style and the mediating role of children's altruistic and antisocial behavior, as far as concerns acceptance by peers, was investigated mainly by means of parents' reports or within observational sessions that took place during laboratory visits (among others, Dishion, 1990; McDonald & Parke, 1984) or in the children's classroom (Diener & Kim, 2004). Relatively few researchers examined the direct link between parental rearing styles and children's social competence by means of observational techniques in everyday-life contexts. Furthermore, when the observations were carried out in home settings, the focus was again placed on some specific aspect of parent-child relationships such as mutual responsiveness, shared positive emotions, total control (Gerrits et al., 2005), support, and control displayed within structured tasks (Dekovic & Janssens, 1992; Janssens & Dekovic, 1997). Moreover, children's social competence was investigated in those studies mainly in terms of just prosocial behavior and prosocial moral reasoning (Dekovic & Janssens, 1992; Janssens & Dekovic, 1997) or mutual responsiveness and shared positive emotions (Gerrits et al., 2005). The study of the global nature of a child's relationship with his/her parents has been neglected. Furthermore, the extent to which parents may affect not only children's prosociality but also other behavioral orientations that might lead to peer acceptance was not taken into consideration.

The idea behind the above-cited studies is that social competence originates in certain characteristics of the child-parent relationship. By contrast, several studies, starting from Hartup (1983) are based on the assumption that peer skills mainly develop within relationships with peers (for a review see Ladd, 1999) and investigate the linkages between children's social skills and peer status. Indeed, comparatively little research has taken into consideration the relative contribution of parental rearing styles and children's social abilities to their success among peers.

The aim of our study was, thus, to examine both children's and parental factors simultaneously for effects on peer acceptance. We took into consideration three behavioral dimensions that are normally considered indicators of children's social competence: prosocial behavior, isolation,

and aggressive behavior within peer groups (Asher & Coie, 1990; Diener & Kim, 2004). The conceptual assumption is that peer relations are important in fostering social competence and that they promote effective adaptation in the environment (for a discussion on the social competence construct see Attili, 1990; Ladd, 1999; Masten & Coatsworth, 1998; Rose-Krasnor, 1997). Prosocial behavior facilitates smooth interactions with peers. By contrast aggressive behavior disrupts relations. Social withdrawal, even though in a less disruptive way, may be associated with missed opportunities for learning a variety of social skills. Children who are prosocial, not aggressive, and not withdrawing have more opportunities for becoming involved in peer interactions; for this reason they can be considered both the most socially competent ones and those whose basic competence can dialectically improve more easily. In fact, in past research these dimensions have been proved to be linked with peer acceptance, a factor that might be considered the outcome of social competence and a strong indicator of effective adaptation in the social environment (Attili, Vermigli, & Schneider, 1997; Coie, Dodge, & Kupersmith, 1990; Rose-Krasnor, 1997; Rubin, Bukowski, & Parker, 1998; see also overviews by Ladd, 1999; Masten & Coatsworth, 1998; Newcomb, Bukowski, & Pattee, 1993).

As a first objective, we checked whether findings on the contributions of a child's behavior toward peers to his social success could be replicated. The second objective was to examine the role of mothers and fathers, considered separately, in school-age children's social competence as defined in terms of both being prosocial, nonaggressive, or isolate and being accepted in peer groups.

We decided to use direct observation and to study the quality of fathers' and mothers' relationships in everyday situations in order to verify the hypothesis that it is the nature of parental relationships *as a whole* that influences children's social competence. Unlike Gerrits et al. (2005) and Janssens & Dekovic (1997), who similarly used direct observation within home settings, we used a coding system that allowed interactions to be broken down into a large number of analysis categories. The questions we asked were: Do prosocial, aggressive, and isolate children differ in the types of interaction patterns they receive from one parent versus the other one? Is the nature of the relationships with parents different for popular vs. rejected children?

The third aim was to explore those aspects of children's behavior within family relationships which could account for their being aggressive, prosocial, or isolate in peer groups and for popularity and rejection, an issue about which little is known. The issue of what a child transfers from the family to the peer context has actually been addressed quite recently and mainly in terms of specific patterns of conversation and shared emotions (Gerrits et al., 2005).

We then investigated the discriminating contribution of parents' rearing styles versus children's social abilities to peer acceptance.

Last, but not least, another important point that this investigation focused on was a methodological one about how to deal with data derived from observational studies – more specifically micro-analytical observation of parent-child interactions; and, at the same time, to deal with subgroups. Investigating the relation between parental interactive styles and children's peer status implies establishing not only terms in which children's social status relates to differences in parents' behavioral categories, but also describing the structure of the parental interactional categories and relating this structure to the subpopulations (peer status). For this reason, we decided to use not only traditional statistical methods, but also a more appropriate way of computing this complex relationship, namely a multidimensional scaling (MDS) approach, aimed at integrating theory and data analysis. More specifically, we used the facet theory as a metatheoretical approach to the research. (Borg & Shye, 1995; Silva, Lyra, & Roazzi, 2001).

Facet theory offers a formal frame of reference for theory construction and hypothesis building in which nonparametric methods are used that systematically requires a minimum of statistical assumptions, and interrelate research design, data collection, and statistical analysis. Even though classic MDS techniques have been considered as unable to deal with subpopulations (Doise, Clémence, & Lorenzi-Cioldi, 1993), we decided, in this investigation, to explore the use of a new statistical tool – the *external-variables-as-points* technique – developed within MDS analyses as an integration of the similarity structure analysis (SSA) by Cohen and Amar (2002). In other words, we used a nonparametric multidimensional scaling procedure (more adequate for small samples such as ours) that differs from other classical MDS techniques in so far as it achieves a monotonic transformation by geometrically portraying the concept space of the variables on the basis of the intercorrelation rank order among them. The unique advantage this analysis offers to solving the problem is that it allows the integration of the external-variables-as-points technique in MDS maps. It enables variables to be displayed as points in an Euclidean space called the "smallest space." The intercorrelations, which are used as an empirical measure of similarity among variables, are represented in that space by distances between pairs of points.

Method

Participants

The parents of 80 children belonging to two-parent families living in Rome, Italy, and primarily of middle-class background, were asked to take part in the study. Permission was obtained for 58 children who were attending the third and fourth grades classrooms of four primary schools. Refusal to participate was not related to the topic of the study (reasons given were infringement on privacy, lack of time).

Thus, we did not expect selective nonresponse bias (see Gerrits et al., 2005). For 24 children, fathers were not able to participate since their work kept them too busy, and so the data referring to them concern only the interactions with their mothers. Thus, the present study describes 34 children (14 boys and 20 girls) for whom we have video-recordings of interactions with both parents. Children's age ranged from 7 years and 6 months to 9 years and 3 months (median age = 8 years and 2 months). Fathers' average age was 40 years (range = 34–44 years) and the mothers' was 34 (range = 28–40 years). Fathers had an average of 13 years formal education, and 60% had a university degree. The mothers had at least 10 years education, and 40% had a university degree. All fathers were employed full time, while 50% of the mothers were employed full time, 30% part time, and 20% did not work outside the home.

Procedures and Instruments

Children's Social Status and Behavioral Orientations: Peer Nominations

Children's social status and behavioral orientations at school were assessed by using peer ratings. Subjects were from 16 different classes. For this reason, peer ratings were collected for all the children attending each classroom. The full subject pool consisted of 224 children (116 boys and 108 girls).

Social Status

All the children within each classroom were asked to nominate (1) which three of their classmates they liked most and (2) which three of their classmates they liked least to play with. Same-gender "play with" nominations were used. Separate positive and negative scores were created by summing the nominations children got for each question. Because of different class sizes, Z-standardized scores of the peer ratings were computed within each classroom. A measure of social preference (SP) was created by subtracting each standardized negative nomination score from its positive counterpart. A social impact measure (SI) was obtained by summing negative and positive standardized scores. SP and SI scores plus the positive and negative standardized scores were used to assign children to social-status categories according to the formulae developed by Coie, Dodge, & Coppotelli (1982).

Distribution of Subjects by Sociometric Category

The above formulae were applied to the sociometric choice nominations of the full subject pool ($n = 224$). Of the 34 children in the observed sample, 15 participants were found to belong to the popular group, 8 to the rejected, and 11 to the average one. By chance, no controversial or neglected child was computed in the observed sample.

Peer Nominations for Aggression, Social Isolation, and Prosocial Behavior

Behavioral orientation toward peers was determined using three peer nomination measures adapted from those developed by Coie et al. (1990). The aggression item was "Who mostly starts fights and/or insults others?" The question: "Who mostly stays alone and withdraws from others?" was added as a parallel question for isolation. In order to measure prosocial behavior, a final question was added: "Who mostly helps others and shares his/her things?" Z-standardized scores based on same gender nominations were calculated as well for these behavioral nominations in the total sample of 224 youngsters.

Parent-Child Relationships: Direct Observation

The quality of mother-child and father-child relationships was assessed by means of direct observation carried out in the subjects' homes. We observed each child interacting separately with his/her mother and his/her father. Each dyad (34 mother-child and 34 father-child dyads) was videotaped twice during 10 min free-play sessions over a 2-week period by five trained female observers. Experimenters supplied a collection of toys on both days and asked parents to do whatever they liked or were accustomed to doing with the child when he/she was given new toys. Since the situation was not structured, parents and children were free to interact or even not to interact and move to another room, according to their individual and usual modalities of spending time together. Interactions were then coded by two trained observers, who were blind with respect to children's peer ratings, using a modified version of Hinde's (1983) coding scheme. The child's behavior both with the father, and with the mother, and behavior directed toward him/her was coded into one of 50 interactive categories in terms of one-zero frequency during 10-second intervals. A maximum of 120 intervals for each child, 60 each for mother and father, was coded. The categories were then grouped into six broader categories in accord with Hinde's cluster-analysis-based conceptualization (Hinde, Easton, Meller, & Tamplin, 1982). Agreement between observers and the reliability for the observed interactions was calculated using 15% of both mother-child and father-child videos in terms of ratio between agreements and the sum of agreements and disagreements. Interobserver reliabilities (Cohen's κ) ranged from 0.74 to 0.87 (mean score = 0.81). The six broad categories and their definitions were (Cohen's κ for each category is given in parentheses): (a) neutral conversation (0.75) – talking about neutral themes, giving information; (b) positive behavior (0.87) – physically friendly, approving, encouraging, helping, comforting, protecting, sharing; (c) negative behavior (0.85) – threatening, criticizing, interfering, self-asserting, hostility expressed in various ways; (d) control patterns (0.84) – inhibiting, forbidding, commanding, suggesting; (e) correcting (0.76) –

giving new information, correcting; (f) disconfirming (0.74) – ignoring, answering irrelevantly. Also coded was the duration of time each child spent playing alone or being by him/herself and that spent playing together with the parent.

The absolute frequency of behaviors recorded for each interactant (mother toward her child; father toward his child; child toward his/her mother; child toward his/her father) in each category within the total time of observation was calculated and used for statistical analysis.

Results

Data were analyzed by both traditional nonparametric tests (Spearman's correlations, Kruskal Wallis test, Wilcoxon signed rank test, logistic regression) and by nonparametric multidimensional scaling techniques (SSA and external-variables-as-points technique).

Children's Behavioral Orientations at School and Sociometric Status

A comparison between popular, rejected, and average children regarding their prosocial and aggressive behavior toward peers in school settings and their tendency to be isolate were computed using Kruskal Wallis Tests. Popular children were significantly more prosocial ($\chi^2 = 5.61, p < .05$) and less aggressive ($\chi^2 = 6.09, p < .05$) than rejected ones. Being average was associated more with being less isolate than with popular and rejected, ($\chi^2 = 9.01, p < .01$).

Children's Behavioral Style Toward Parents, Social Behavioral Orientations Toward Peers, and Social Success at School

To investigate the question of what children transfer to school of their behavior at home toward their parents, we examined matrices of Spearman correlations between the various aspects of children's interactive style within parent-child relationships and their behavioral orientations toward peers, such as being prosocial, aggressive, and isolate. Correlations revealed that the more children were negative and controlling toward their mother the more isolate they were at school ($r = 0.28, p < .05$; $r = 0.29, p < .04$, respectively). No other coefficient appeared to be significant.

Nevertheless, when associations between their style at home and social success at school were considered using the Kruskal Wallis test, it appeared that the children popular in the peer group were those who displayed less negative behavior toward their mothers at home, as compared to rejected and average children, even though significant differences were found only for popular vs. average status,

($\chi^2 = 6.85, p < .05$). As far as control patterns are concerned, popular children were significantly less controlling of their mothers than rejected and average ones ($\chi^2 = 6.73, p < .05$). Rejected children were more disconfirming when interacting with mothers than popular ones ($\chi^2 = 5.25, p < .05$) and were more likely to play by themselves than the other two groups ($\chi^2 = 3.78, p < 0.05$). No significant difference (Wilcoxon signed ranks test) was found regarding behavior displayed by children with a different status when interacting with fathers, even though it appears that rejected children were significantly more disconfirming toward their mothers vs. fathers ($z = 2.33, p = .02$) and average ones were more likely to correct mothers than fathers ($z = 2.04, p = .04$).

Maternal and Paternal Interactive Style, Children's Social Skills, and Peer Acceptance

Spearman's correlations were used to analyze associations between both mothers' and fathers' interactions and children's social competence as defined in terms of being prosocial, not overtly aggressive, and not isolate in peer groups. Aspects of mothers' interactive style, such as displaying negative behavior and disconfirming, appeared negatively correlated with prosociality ($r = -.26, p < .05$; $r = -.26, p < .05$); aggression correlated negatively with mothers' involvement in neutral conversation ($r = -.31, p < .03$) and positively with their disconfirming ($r = .23, p < .08$). As far as father-child interactions are concerned, few correlations were found: Parental controlling correlated negatively with being prosocial ($r = -.31, p < .07$); aggression correlated positively with fathers' disconfirmation ($r = .30, p < .08$).

A Kruskal Wallis test was then used to compare the children's three social-status groups as far as both maternal and paternal rearing styles when considered separately. This test was used together with a post hoc test. The social status groups were the independent variables (between groups), and fathers' and mothers' positive, negative behavior, control patterns, neutral conversation, correcting, and disconfirming were the dependent variables.

Popular children had less controlling mothers than rejected and average children ($\chi^2 = 6.11, p < .05$). Positive behavior was displayed more by mothers of popular and average children than by those of rejected ones ($\chi^2 = 5.74, p < .05$). Mothers of rejected children were more negative than those of popular children ($\chi^2 = 5.56, p < .05$).

As far as the quality of father-child relationships was concerned, findings were significant only for controlling interactions, with fathers of rejected and average children more inclined to display this type of behavior than fathers of popular children ($\chi^2 = 6.45, p < .05$).

A Wilcoxon signed ranks test was used to compare mothers' and fathers' behavioral orientations within each

social status group. Parent's sex was the independent variable and behavioral categories the dependent ones.

Results indicate that popular children had mothers who were more correcting than the fathers ($z = 2.32, p = .02$). Mothers of rejected children were more negative ($z = 1.89, p = .04$) and more disconfirming ($z = 1.84, p = .05$) than fathers. Average children had mothers who were more negative than fathers.

MDS Analyses of Children's Peer Status and Parents' Interactive Style: Similarity Structure Analysis and External-Variables-as-Points Technique Results

This section illustrates the results referring to the relation between parental interactive styles structure and children's peer status groups. As already stated, for this analysis we used a MDS approach using the SSA and the external-variables-as-points technique developed by Cohen and Amar (2002).

The external-variables-as-points technique allows sub-populations in MDS analyses to be plotted, i.e., it allows external variables to be integrated into MDS maps. For the MDS the SSA (smallest space analysis, see Bayley, 1974; or similarity structure analysis, see Borg & Lingoes, 1987) was used. Rather than using a least square transformation, SSA sorts the distances into the order specified by the data (Guttman, 1986). By inserting external variables and locating them in the SSA space it is possible to obtain more detailed information about subgroups of a population. The Guttman's weak monotonicity coefficients (MONCO; Guttman, 1986) were first constructed for each of the content variables (the parental behavioral categories). Coefficients assessed the extent to which two items varied in the same direction, and ranged from -1 to $+1$. Based on this correlation matrix, a SSA map was computed. Next, the external variables (popular, average, and rejected) were introduced one by one and located on this map, taking into account the correlations of each external variable with all of the original content ones. It is important to underline that the correlations between the external variables were not considered.

The questions were: What is the structural relationship of the parental behavioral categories mediating the quality of a child's relationship with his/her mother and father? How does this structure relate to peer social status?

Figure 1 presents the SSA plot of the six mother-child interaction categories with children's social status as external variable. The coefficient of alienation is 0.12, indicating a good fit between the SSA solutions and the input correlation matrices.

It is possible to observe an axial structure in this distribution of behavioral categories. The plot is divided into two regions: On the left side is the allocation of three maternal behavioral categories displaying a high similarity among

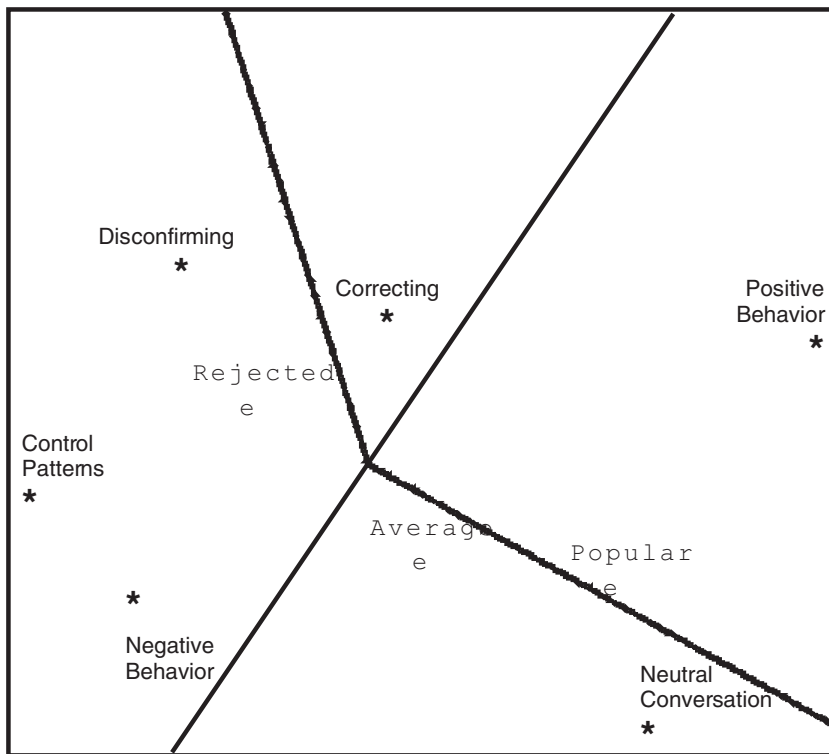


Figure 1. SSA projection of the six mothers' behavioral categories with children's peer social status as external variable (2-D, coefficient of alienation.12).

themselves. Disconfirming, control patterns, and negative behavior actually share a clear-cut devaluing attitude toward the child as a person.

On the right-hand side, positive behavior is located at the top and neutral conversation at the bottom, indicating the different role they play in the mother-child interaction compared to that played by the previous three behaviors.

Correcting is allocated to a region between disconfirming on the left-hand side and positive behavior on the right (intercorrelating .40 and .21, respectively). Correcting, indeed, plays a triggering role in the main stream of parental interactive style since both teaching in a gentle way and correcting have been coded in this category.

Not surprisingly, the first external variable (popularity) is located between the two categories on the right-hand side and correlates positively with them (positive behavior .37, neutral conversation .40); interestingly, it is closer to neutral conversation, since the latter behavioral category may well give a child an indication of his/her mother's greater availability to interact with him/her. Correlations with variables such as disconfirming, control patterns, negative behavior, and correcting are highly negative (–.86; –.67; –.78; –.30, respectively).

It is also not surprising that the second external variable (rejection) is located in the middle of the last four categories with which it is positively correlated (disconfirmation .91, control patterns .18, negative behavior .64, correcting .17), while it is negatively correlated with positive behavior and with neutral conversation (–.85 and –.50, respectively). The third external variable, the average subgroup, is located in the middle between the popular and rejected groups.

Figure 2 shows the SSA projection of the same six parent-child categories with children's social status as external variable as far as the fathers' interactive styles are concerned. This time the coefficient of alienation is .004, indicating a very good fit.

Two highly similar paternal-behavior categories are located on the top region of the plot – disconfirming and negative behavior. They actually share a clear devaluing attitude toward the child as a person. In addition, on the extreme right-hand side neutral conversation appears, which is positively correlated with the latter (.76) and negatively with the former (–.62).

On the bottom right side, two other paternal behavioral categories are located, correcting and control patterns, which also display a harsh style of interaction, even though of a different nature to the previous three.

Positive Behavior is isolated on the extreme bottom left side of the plot. This last category is the only one having negative correlations with all the others, especially neutral conversation (–.83) and negative behavior (–.74).

In conclusion, comparison with the previous plot allows us to observe two main differences. First, the locations close together of neutral conversation and negative behavior (.76). Next, the very high correlations between correcting and control patterns (.78) and their isolation from all the other behavioral categories.

The three external variables are located in a straight horizontal line. The external variable popular is located above positive behavior (left side of the plot), and at the end of this straight line (right side of the plot) is the external variable rejected. Average is located in the middle, between

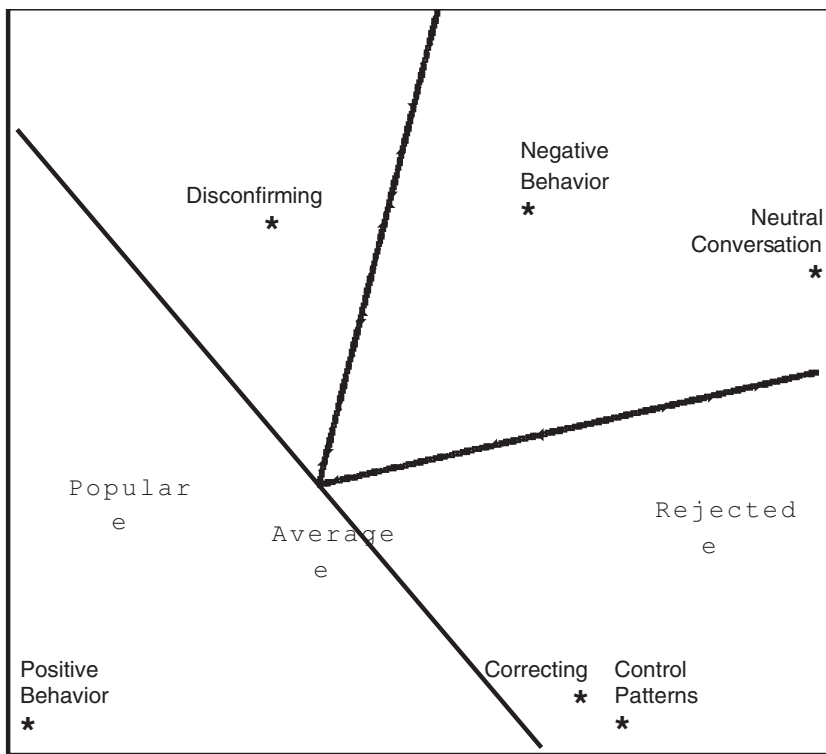


Figure 2. SSA projection of the six fathers' behavioral categories with children's peer social status as external variable (2-D, coefficient of alienation.004).

Table 1. Logistic regressions (forward stepwise) considering the three children's peer status as dependent variables (DV) (both for maternal and paternal interactive styles) having as independent variables the parental interactive categories and the three children's behavioral orientations at school

Steps in the equation for each DV	MU ₂ *	Improvement		Model			Nagelkerke R ²	
		χ ²	df	P	χ ²	df		P
Maternal Interactive Styles								
DV Popular								
1. Aggression	-.69	6.043	1	.014	6.043	1	.014	.218
2. Control patterns	-.67	5.133	1	.023	11.176	2	.004	.375
DV Rejected								
1. Disconfirming	.91	8.734	1	.003	8.734	1	.003	.341
2. Negative behavior	.64	3.376	1	.066	12.109	2	.002	.451
3. Isolation	.68	7.041	1	.008	19.150	3	.000	.648
4. Aggression	.66	4.397	1	.036	23.547	4	.000	.752
DV Average								
1. Isolation	-.78	9.994	1	.002	9.994	1	.002	.356
Paternal interactive styles								
DV popular								
1. Control patterns	-.81	8.157	1	.004	8.157	1	.004	.286
DV Rejected								
1. Aggression	.66	4.306	1	.038	4.306	1	.038	.179
DV Average								
1. Isolation	-.78	9.994	1	.002	9.994	1	.002	.356

*MU₂ or μ₂ indicate the correlation (Week monotonicity coefficient) of DV with the type of behavioral category.

these two (and closer to popular),. The highest negative correlations are observed in the external variables popular and rejected, reflecting the different role played by these variables in fathers' interactions. While popular presents a very high negative correlation with control patterns and correcting ($-.81$ and $-.61$, respectively), rejected presents a very high negative correlation with positive behavior ($-.78$).

Logistic Regression of Children's Peer Status, Parents' Interactive Style, and Children's Behavioral Orientations at School

Table 1 shows six logistic regressions (forward stepwise) related to the three children's peer status (popularity, rejection, and average) as dependent variables. These were used three times, taking as independent variables maternal styles (that is positive behavior, control patterns, neutral conversation, correcting, and disconfirming) and children's behavioral orientations at school (prosociality, aggression, and isolation); the same dependent variables were used three times again, taking as independent variables paternal styles and again children's behaviors at school.

In other words, the question was: Which variable mostly affects children's sociometric status – their parents' relational styles at home, or their own orientations toward peers at school? In order to interpret the result of this analysis more fully we also report the MU2 (week monotonicity coefficient) of the variables included in the equation.

As far as popularity is concerned, it appears that a child's behavioral orientation had a major role with respect to maternal rearing styles: The less aggressive children were toward peers, the more popular they were at school, even though social success was also influenced by having less controlling mothers. By contrast, rejection was mostly affected by having disconfirming and negative mothers, with disconfirmation having the strongest impact on this social status, even though being isolate and aggressive in the school settings played a strong role. Being unable to stay by themselves, that is, not being isolate, was the only variable significantly predicting being average in the peer groups.

The only fathers' variables involved in the equation were parental control patterns, which had a negative direction, in the case of popular children. Indeed, taking into consideration rejection and the average group, only a child's behavior played a role (aggression and isolation, respectively) in children's social status.

Conclusions

Our results provide evidence of the simultaneous contribution of children's social abilities and parent-child interac-

tions to success in peer groups. In agreement with a large body of research on this topic, starting with Coie et al. (1990), we found that, in comparison with rejected children, popular children were those who were more prosocial, less aggressive, and less isolate at school.

Indeed, in accord with developmental theorists who have long argued that peer relations have roots in family relationships (Attili, 1989; Elicker, Englund, & Sroufe, 1992; McDowell & Parke, 2000), we also found that prosocial and aggressive children had different family experiences (differences were not found as far as isolation was concerned). In our study, good parenting appears to be related to the capacity to display prosocial behavior and regulate aggression even though stylistic differences between mothers and fathers are linked to peer interaction (and popularity ratings) in different ways. Aggression is associated with being disconfirmed by both fathers and mothers and with a lack of involvement in conversation with the latter. Moreover, in line with previous studies focusing on links between parental rearing styles and a child's prosocial behavior (Janssens & Dekovic, 1997; Hoffman & Saltzstein, 1967; Staub, 1979) we found prosociality was associated negatively with mothers' negative and disconfirming interactions and to fathers' controls.

Prosociality and aggression might be considered the mediating link in the relationship between fathers' and mothers' interactive styles and a child's sociometric status at school. Thus, not surprisingly, social success was also associated directly with strong differences in the quality of parent-child interactions. Popularity is, in our study, predicted by the experiencing of fewer controls in interactions with both parents; furthermore, popular children experienced less negative, disconfirming, and more positive behaviors by their mothers (although not by their fathers), in line with Dekovic and Janssens's work (1992), where it was found that popular children had parents who were keener to adopt an authoritative/democratic style, that is, to use more suggestions, support, and encouragement.

To be involved in a relationship based on warmth, and a lack of criticism, controls, and disconfirming makes a child feels secure in his/her affective bonds and for this reason able to explore the social environment (see Bowlby, 1969). Parental controls and criticisms, far from functioning as either negative reinforcements or threats, make a child feel insecure about the parents' willingness to protect in the case of need and for this reason seem to promote rather than to discourage disrupting behaviors. In other words, children who can count on parents who do not ignore them and are capable of understanding their needs can use their attention at school to monitor classmates in need of help and to regulate aggression; these might be the reasons that they are mostly liked by their peers.

Mothers seem to play a more decisive role in children's social competence than fathers, a result which is in line with Lamb and Oppenheim's (1989) findings indicating a higher involvement by mothers than by fathers in children's care. Nevertheless, it appears that children within

the same social status group generally experience the same interactions with both parents with the only differences between fathers and mothers the negative and disconfirming behavior experienced by rejected children, and correcting interactions experienced by popular children: In both cases these categories were again found more frequently in mother-child than in father-child relationships.

Success in a peer group may be affected by the simultaneous contribution of children's social abilities and of parent-child interactions; nevertheless it must also be said that a child's tendency to be aggressive in the peer group overrides a lack of mother's directiveness in predicting popularity. By contrast, rejection is more likely to be predicted by having a mother who is disconfirming and negative than by being isolate and aggressive at school. When fathers' rearing styles are considered, popularity is predicted mostly by a lack of control exerted by them, while rejection tends to be predicted by a child's behavioral orientation toward peers such as being aggressive.

Interestingly, children's observed behavior at home toward mothers also accounts for peer acceptance at school: Children displaying negative behavior, control patterns, and disconfirmations when interacting with the parent were more likely to be rejected by peers, presumably because children transfer toward classmates the interactive style they customarily used when at home. This seems true even though there was no significance between children's negative behavior, controlling of mother, and isolation in school, although, admittedly, this behavioral orientation does not seem as important as aggression and prosociality.

One explanation might be that social competence at school is mediated both by other interactions (apart from prosociality and not being aggressive) that are more similar to those displayed at home and by competent behavior within a group, or entering a group, different from those used when interacting dyadically (Gerrits et al., 2005; Hinde, 1997; Volling, McKinnon-Lewis, Rabiner, & Baradan, 1993). Incidentally, it must be underlined that children's interactions at home mirror the way they are treated by their parents and represent the other face of the same coin. It might be argued, in line with Russell, Pettit, & Mize (1998) and Gerrits et al. (2005), that the child-mother interaction contains horizontal qualities in terms of mutuality.

The results emerging from the use of traditional statistical tests were corroborated by those we found using a MDS approach, a nonparametric technique that allowed the dimensions of child rearing to be considered in their interconnections, and that allow such a small sample as ours to be handled.

Instead of analyzing different SSA, one for every subgroup (each children's peer status group), we produced a single integrative plot simultaneously representing data (the parental behavioral categories) and illustrating the relations of the three subgroups in these categories. The integrated analysis of the SSA and the external-variables-as-points technique, thus, gives us a picture of children's success at school as being the outcome of complex correlations

of each variable with all the others. The overall structure of the parental behavioral categories appears to be related to peer status. Considering mother-child and the father-child relationships separately reveals the extent to which global experiences within households can account for social success in peer groups. Popular (and, even though more marginally, average) children are located in a space characterized by mothers' and fathers' positive behavior with some influence from being involved in conversation with mothers.

Mothers' positive behavior signals an obvious positive style; neutral conversations only indicates their availability to deal with the child and to interact with him/her. Incidentally, these two categories are negatively intercorrelated ($-.34$); it may actually be that mothers who were highly positive to their children, that is who spent time in their interactions helping and encouraging them, were less keen to simply engage in a conversation on neutral themes.

Rejected children are located in a space of disconfirming, control patterns, and negative behavior by mothers, dimensions sharing a devaluing attitude toward the child as a person. Furthermore, rejection in peer groups appears to be located in a space where not only fathers' controlling has a role, as was found using the Kruskal Wallis test, but also other aspects of their rearing style, such as correcting, negative behavior, and disconfirming. The fact that their neutral conversations is positively correlated with negative behavior and negatively correlated with disconfirming suggests that fathers who are extensively involved in conversations with their children do not use an extreme devaluing way of interacting with them, such as disconfirming, but do not refrain from criticizing and being hostile toward them.

Thus, on the whole, these results converge with the findings of Bhavnagri and Parke (1991), Dekovic and Janssens (1992), and McDonald and Parke (1984), who did not find any differences between the two parents in rearing styles. This picture did not emerge when traditional statistical tests were used.

This study has several limits: The small size of the sample means that results are difficult to generalize, even though they are in line with the literature on this topic and based on nonparametric statistics. Also, the sample was rather homogeneous, being predominantly middle-class families: This might mean either a reduced variance or distribution in some variables. The use, in some analyses, of correlational tests means that it is difficult to detect the direction of the causes and effects. The lack of a longitudinal perspective meant it was not possible to determine any of the long-term effects of parent-child relationships. Indeed, peers may play a protective role in development (Collins & Laursen, 2004; Hartup, 1996; see Ladd, 1999; Masten & Coatsworth, 1998) and we do not know whether social abilities acquired in peer contexts can affect children's behavior at home. Future research could provide some insight into the possibility of a bidirectional influence of peers and family relationships and allow the long-term influence of

both contexts on children's social competence to be assessed. Furthermore, it might be worthwhile to validate the findings of our study in other cultural and social settings.

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